

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A method of bonding an optical fiber to a metallic a ~~glass material element and a non-glass material element using a glass fixative preform~~, the method comprising the steps of:

positioning providing a glass preform immediately adjacent to the optical fiber
and the metallic element for bonding the glass material and the non-glass material; and
inducing current flows in the metallic element in the region of the preform to
generate sufficient heat heating the preform to melt the preform; and to thereby form
~~forming a bond with melted glass from the perform, the bond forming between the~~
optical fiber glass material element and the metallic non-glass material element.

2-4. (Canceled)

5. (Currently Amended) A method as claimed in Claim 1, wherein, in the step of heating the preform, an induction heater is positioned in the vicinity of the bond so as to cause induction currents to flow in the metallic element non-glass material which melt the preform.

6. (Canceled)

7. (Currently Amended) A method as claimed in Claim 1, wherein the glass ~~material element is a glass fiber, further including the step of removing non-bonding~~
~~coating material from the surface of the an optical fiber to expose a portion of the~~
optical glass fiber to be bonded.

8. (Currently Amended) A method as claimed in Claim 1, wherein, in the step of heating the preform, forming the bond the preform is heated to a temperature in the range 280°C to 480°C.

9. (Currently Amended) A method as claimed in Claim 1, wherein, in the step of heating the preform, forming the bond the preform is heated to a temperature in the range 320°C to 370°C.

10-27. (Withdrawn)

28. (Currently Amended) A glass material bond formed between an optical fiber a glass material element and a metallic non-glass material element with a glass fixative, the bond being an induced current flow bond formed by positioning a glass preform adjacent the optical fiber and the metallic element and inducing current flows in the metallic element to generate sufficient heat to melt the preform.

29-30. (Canceled)

31. (Currently Amended) A bond as claimed in Claim 28, wherein the metallic non-glass material element has a ferromagnetic characteristic.

32. (Currently Amended) A bond as claimed in Claim 28, wherein the metallic non-glass material element has a ferrimagnetic characteristic.

33. (Original) A bond as claimed in Claim 28, wherein the glass fixative includes a lead oxide.

34. (Currently Amended) A bond as claimed in Claim 28, wherein the glass fixative further includes at least one constituent taken from the group including consisting of: lead fluoride, and at least one oxide of: niobium, copper, bismuth, iron, zinc, titanium, aluminum, boron, silicon, and calcium.

35. (Original) A bond as claimed in Claim 28, wherein the glass fixative composition includes the following: PbO; PbF₂; Nb₂O₅; CuO; Bi₂O₃; Fe₂O₃; ZnO;

TiO2; Al2O3; B2O3; SiO2; and CaO.

36. (Original) A bond as claimed in Claim 28, wherein the glass fixative composition includes the following constituents in the following proportions: PbO 60%wt to 65%wt; PbF2 2%wt to 5%wt; Nb2O5 2%wt to 5%wt; CuO 0.5%wt to 1.5%wt; Bi2O3 6%wt to 7%wt; Fe2O3 2%wt to 3%wt; ZnO 2%wt to 3%wt; TiO2 5%wt to 7%wt; Al2O3 0.1%wt to 0.3%wt; B2O3 2%wt to 3%wt; SiO2 0.1%wt to 0.4%wt; CaO 1% to 1.5%wt.

37. (Currently Amended) A bond as claimed in Claim 28 26, wherein the bond is hermetic.

38. (Currently Amended) An optical component containing at least one glass bond as claimed in Claim 28.